

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-002207**Date Inspected:** 15-Apr-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1500**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2200**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Huang Wen Pang**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** See Below**Summary of Items Observed:**

On this date, Caltrans Office of Structural Materials (OSM) Quality Assurance (QA) Inspector Edward Leach was present to randomly observe and document the welding and Quality Control (QC) functions performed by ZPMC personnel relative to the fabrication of SAS Superstructure project. While on site, the QA Inspector noted the following work.

Bay 7

The QA Inspector made a random observation to observe in-process sub-merged arc welding (SAW) for a 12mm floor beam diaphragm plate. The piece mark designations on the adjoining plates are FB015-014-023 and FB015-014-026 (see digital picture below). The QA Inspector reviewed the information on the daily welding report provided by ZPMC QC personnel Yong Ding and noted the following information for the welding parameters, 600-675 amperes, 31.7 volts and an average travel speed of 500 mm per minute. The welding procedure specification (WPS) used for this application was WPS-B-T-2221-B-L2C-S-1. The welders name and identification (ID) are Yin Gao Gin, ID 058081. At the time of this observation the QA Inspector observed ZPMC had completed the final cover pass and the QC Inspector was performing a visual weld inspection of the material. The QA Inspector also performed a random visual observation of the completed work and noted that the work appeared to comply with the contract specifications.

Also in bay 4, the QA Inspector performed 10% ultrasonic testing (UT) verification after UT acceptance by ZPMC QC personnel for ten (10ea) pieces of triangular shaped floor beam diaphragm plates (see digital picture below). The QA Inspector observed that the adjoining members were of different thicknesses with the thicker member at 30mm and the thinner member at 12mm. The weld between the two members is an 1800 mm transitional

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complete joint penetration (CJP) butt weld splice. The QA Inspector performed UT for approximately 200mm of the weld length on each plate using a 70 degree shear wave transducer. The piece mark designations for the material tested are as follows; FB011-008-026, FB010-002-026, FB010-001-026, FB012-005-026, FB011-001-026, FB012-001-026, FB012-009-026, FB012-006-026, FB012-003-026, FB012-002-026. Each weld was inspected from side A only. The UT inspection was performed to the requirements of AWS D1.5-2002, Section 6, Table 6.3 (Tensile Stress). Upon completion of testing no relevant indications were noted and a TL-6027 UT report was generated for these items. The UT performed by ZPMC QC personnel appeared to comply with the contract specifications.



Summary of Conversations:

No relevant conversations this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Leach,Ed	Quality Assurance Inspector
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Reviewed By:	Hager,Craig	QA Reviewer
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